



### Summer Workshop featuring NASA Mission Science!

Throughout the school year, an ongoing NESSP (Northwest Earth and Space Science Pathways) cohort of teachers work to strengthen the STEM pathways on the Olympic and Kitsap Peninsulas and provide equity and access to NASA-inspired Career-Connected Learning. Utilizing NASA Mission Science, students engage in standards-aligned, innovative classroom learning, and develop an awareness and exploration of, as well as prepare for, STEM careers. Additionally, as part of their participation, these teacher-leaders scale their experiences by mentoring three other educators within their district—sharing



activities, instructional strategies aligned with Washington State Learning Standards, and reflecting on equitable implementation in their classrooms.

June 29th and 30th, WSSN held its two-day, hybrid (virtual and in-person) NESSP summer

workshop for twenty-two educators from ten regional districts. Regional teachers and cohort members immersed themselves in puzzles and other challenges to enhance the concepts of spatial and visual reasoning, and reconfigured and strategic thinking, which can be integrated into core content areas to actively and equitably engage all students in career-connected learning. Included in the workshop was a dive into NASA Missions, including Artemis in which "NASA will land the first woman and first person of color on the Moon, using innovative technologies to explore more of the lunar surface than ever before." One participating educator describing the workshop wrote, "The integration of NASA and our state standards was perfect. This is exactly what I need to engage students and also follow my district's curriculum. I will use the puzzle example with my students before the end of the year."

### Early Learning and Wind Power

In partnership with Storytime STEM, WSSN hosted a two-day training in June for PreK-2 teachers where they learned to introduce their early-learners to STEM through a specialized Storytime STEM-pack.

Participants explored the Energy and Engineering Design Storytime STEM-pack, *The Boy Who Harnessed the Wind*, increasing their understanding of how young children build understanding of concepts of weather, energy, and engineering design in an integrated, age-appropriate way. While increasing their own knowledge of science and engineering standards, teachers collaborated on ways to integrate these concepts into Language Arts content and shared best practices for creating an inclusive, and engaging learning environment for all students. Twenty-four participants represented six districts in the WSSN region: Bremerton, North Mason, Port Angeles, Peninsula, Quilcene and South Kitsap.

### Code.org

Partnering with *Code.org*, WSSN hosted thirty-three regional educators for a two-day introduction to Code.org's computer science fundamentals curriculum.

Teachers learned to navigate the Code.org resources, which focus on increasing participation by young women and students from other underrepresented groups, and joined an already active community of Computer Science educators regionally, statewide, and nationally.

Teachers were able to collaborate with peers, as well as share new instructional and student learning strategies for K-5 and best practices for creating an inclusive, and engaging learning environment for all students.

### WSSN Awarded \$56,500 for Computer Science!

West Sound STEM Network was awarded OSPI funding from the 2022-2023 Computer Science Across the Region (COSTAR) grant! This award ensures a fifth year of a COSTAR teacher cohort supported by a multi-district, higher education, and business consortium focused on computer science competencies, equity, and industry-education partnerships. COSTAR grants empower districts, schools, and non-profits to train teachers and provide and upgrade technology. Teachers expand and deepen their computer science knowledge by partnering with industry experts which in turn creates career connected learning experiences for their students. A major focus of the grants is to expand computer science access to groups of students who have historically been underrepresented in computer science programs and careers.

Thank you to district representatives for supporting their teachers to participate in the 2021-2022 cohort, to business and education partners MacDonal-Miller Facility Solutions, Western Washington University, the University of Washington, Olympic College, Chief Kitsap Academy, Galaxy Theatres, and to school district leaders for co-creating the COSTAR program.

#### REPORT HIGHLIGHTS:

**COSTAR & NESSP Summer Workshops**

**Pacific Northwest National Laboratory Teacher-Scientist Partnership**

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#### Recently Held...

**STEM Cafés:**

**Storm Drain Detectives, September 30**

**Healthcare Pathways,  
Northwest Family Medicine Residency,  
October 4**

**Energy and Power Grids, October 5**

#### On the Horizon...

**STEM Café: Astronomy, October 13**

**Equity Roundtable (Virtual):  
October 13, 2022— 9am-1pm; Zoom**

**STEM Café: Kitsap Public Health District,  
October 18**

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## Gameplay Highlights Computational Thinking

WSSN and partners NUWC Keyport and PSNS & IMF hosted twenty educators from eight school districts at the two-day COSTAR (Computer Science STEM Opportunities Across the Region) Summer Workshop in June. The summer workshop supports regional teachers to join the ongoing cohort for a two-day experience using game play to further understand and apply the connection between computational thinking and solving problems.

Teachers engaged in engineering-based computer coding and explored the concepts of strategic planning, sequencing, spatial reasoning, multi-layered conditionals, input/output, commands, processing, and decision-making through favorite games such as *UNO*, *Simon*, *Othello*, *Dominoes*, *Jenga Maker*, *Snap-Circuits Rover*, and *Gravitrax* to name a few. Each provided tangible connections to the importance of computer science competencies, and allowed opportunities for educators to reflect on access, sharing best practices for inclusive scaling of game play in the classroom to engage all students, especially those furthest from opportunity.



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## Hidden Figures: Looking Through An Equity-Based Lens

WSSN held the last 2021-2022 *Hidden Figures* book study in June. Chronicling the true story of three brilliant African-American women at NASA: Katherine Johnson, Dorothy Vaughan, and Mary Jackson, the book and corresponding movie highlight their intelligence, sisterhood, and perseverance, as well as the racial and gender discrimination which affected their lives.

Participants examined the challenges and successes of these women, learned about historical, current, and future NASA missions—including Apollo, A-Train, Hubble, Spitzer, WISE, Artemis, and James Webb Space Telescope, participated in associated hands-on activities, examined NGSS standards relating to the work of NASA, networked with their peers, and connected their learning with classroom instruction. Wrote one teacher of the experience, “Taking this training gave me an insight about the history of *Hidden Figures*, how this lens can be closely applied to education, and tools that we can provide to ensure all students are successful in STEM.” Teachers from the region filled 141 slots in the book study for 2021-2022.

## Teacher-Scientist Partnerships Explore Renewable Energy

This July, WSSN region teachers participated in Pacific Northwest National Laboratory’s (PNNL) week-long Teacher-Scientist Partnership (TSP) program. The program partners teachers with PNNL scientists in the field or laboratory where they gain a wealth of new experiences to share and inspire students to be curious about real-world problems.

The research experiences align with Washington State Science and Learning Standards and help teachers to reimagine classroom lessons to be even more engaging and relevant to their students. Teachers leave their TSP experience with a better understanding of real-world STEM problems, deepen their understanding of the concepts they teach, and gain awareness of the breadth of STEM career pathways available for their students.

This year, teachers focused on the science, creation and uses of renewable energy.

Participants connected NGSS standards to their work and explored career connected and phenomenon-based learning in sessions such as Intro to Bulk and Distributed Energy, Bulk System Planning, Energy Equity and Justice, and Wind Energy Feasibility—which included a Global Wind Atlas Map demonstration.



## Notes:

WSSN offers onsite assistance to Network school districts to increase student FAFSA/WASFA completion by utilizing best practices, interventions and tools available in the Financial Aid Completion Playbook distributed statewide in 2021. You can view Washington Student Achievement Council’s overview of all available FAFSA/WASFA data and context here: [www.wsac.wa.gov/fafsa-completion](http://www.wsac.wa.gov/fafsa-completion), and a direct link to more in-depth data by district, school, region, year, etc. here: <https://public.tableau.com/viz/StateFAFSACompletionDashboard/StateFAFSACompletion>

**28 Teachers attended** WSSN’s June 9th STEM Café: *Icy Worlds* to learn about NASA’s work with extreme environments.

**More than 50 virtual field trips** for students to Pacific Science Center were supported by West Sound STEM last year.

**Exciting work continues on “STEM Like ME!”** which pivoted to a virtual environment last year. STEM Like ME! brings STEM industry professionals into classrooms for an interactive career exploration experience. In 2021-2022, 1,749 students and 79 classrooms participated in these industry-education career exploration experiences and more continue to be scheduled for 2022-2023.

**A third workshop for 2021-2022** for the Ocean Observatories Initiative cohort of teachers was held June 11 & 12.